index nl**2** lower than the refractive index nc of the p-type AlGaAs cladding layer **4**. Equation (2) needs to be satisfied here as in the case of the third embodiment.

[0072] FIG. **19** is a diagram illustrating active layer positional dependency of light confinement of the active layer of the semiconductor laser device according to the fifth embodiment of the present invention. When the active layer **11** is disposed from point A (+359 nm) where the light confinement value becomes the same as that at the center of the light guide layer **3** of the symmetric structure to a position of an end of the p-side light guide layer (+600 nm), it is possible to reduce light absorption by carriers in the light guide layer **3** compared to the symmetric structure and the conventional asymmetric structure, and thereby increase the slope efficiency. As a result, it is possible to reduce an operating current during high output power and improve the power conversion efficiency.

[0073] Note that when the active layer **11** is disposed between a point of intersection B (+579 nm) with light confinement of the symmetric structure and point A, it is possible to reduce a threshold current compared to a case where the active layer **11** is disposed in the section of the symmetric structure.

Sixth Embodiment

[0074] FIG. **20** is a cross-sectional view illustrating a semiconductor laser device according to a sixth embodiment of the present invention. FIG. **21** is a diagram illustrating a refractive index distribution along a crystal growing direction in the vicinity of an active layer of the semiconductor laser device according to the sixth embodiment of the present invention. A p-type AlGaAs cladding layer **17** having an Al composition ratio of 0.350 and a layer thickness of 1. 5 μm is provided instead of the p-type AlGaAs cladding layer **4**. The rest of the configuration is similar to that of the fourth embodiment. Since increasing the Al composition ratio of the p-type AlGaAs cladding layer **17** and decreasing a refractive index corresponds to a direction in which the normalized frequency is increased, the present embodiment also provides a structure in which a high-order mode equal to or higher than the first-order mode is permissible.

[0075] FIG. **22** is a diagram illustrating active layer positional dependency of light confinement of an active layer of the semiconductor laser device according to the sixth embodiment of the present invention. When the active layer **11** is disposed from point A (+365 nm) where the light confinement value becomes the same as that at the center of the light guide layer **3** of the symmetric structure to a position of an end of the p-side light guide layer (+600 nm), it is possible to reduce light absorption by carriers in the light guide layer **3** compared to the symmetric structure and the conventional asymmetric structure, and thereby increase the slope efficiency. In the present embodiment, the active layer **11** is disposed at a position at which refractive indexes of the first light guide layer **13** and the second light guide layers **14** and **15** are the same and refractive indexes of the n-type AlGaAs cladding layer **2** and the p-type AlGaAs cladding layer **17** are the same while there is no n-type AlGaAs low-refractive-index layer **12**, and the light confinement of the active layer **11** is smaller than that in the symmetric structure in which the active layer **11** is disposed at the center of the light guide layer **3**. As a result, it is possible to reduce an operating current during high output power and improve the power conversion efficiency.

[0076] Note that when the active layer **11** is disposed between a point of intersection B (+566 nm) with light confinement of the symmetric structure and point A, it is possible to reduce a threshold current compared to a case where the active layer **11** is disposed in the section of the symmetric structure.

Seventh Embodiment

[0077] FIG. **23** is a cross-sectional view illustrating a semiconductor laser device according to a seventh embodiment of the present invention. The p-type AlGaAs low-refractive-index layer **16** having an Al composition ratio of 0.600 and a layer thickness of 40 nm is formed between the light guide layer **3** and the p-type AlGaAs cladding layer **17**. The rest of the configuration is similar to that of the sixth embodiment.

[0078] FIG. **24** is a diagram illustrating a refractive index distribution along a crystal growing direction in the vicinity of an active layer of the semiconductor laser device according to the seventh embodiment of the present invention. The p-type AlGaAs low-refractive-index layer **16** has a refractive index nl**2** lower than a refractive index ncl of the p-type AlGaAs cladding layer **17**.

[0079] Equation (2) needs to be satisfied as in the case of the third embodiment assuming that the refractive index of the n-type AlGaAs low-refractive-index layer **12** is nl**1**, the layer thickness of the n-type AlGaAs low-refractive-index layer **12** is dl**1**, the refractive index of the p-type AlGaAs low-refractive-index layer **16** is nl**2** and the layer thickness of the p-type AlGaAs low-refractive-index layer **16** is dl**2**.

[0080] FIG. **25** is a diagram illustrating active layer positional dependency of light confinement of an active layer of the semiconductor laser device according to the seventh embodiment of the present invention. When the active layer **11** is disposed from point A (+336 nm) where the light confinement value becomes the same as that at the center of the light guide layer **3** of the symmetric structure to a position of an end of the p-side light guide layer (+600 nm), it is possible to reduce light absorption by carriers in the light guide layer **3** compared to the symmetric structure and the conventional asymmetric structure, and thereby increase the slope efficiency. As a result, it is possible to reduce an operating current during high output power and improve the power conversion efficiency.

[0081] Note that when the active layer **11** is disposed between a point of intersection B (+510 nm) with light confinement of the symmetric structure and point A, it is possible to reduce a threshold current compared to a case where the active layer **11** is disposed in the section of the symmetric structure.

Eighth Embodiment

[0082] FIG. **26** is a cross-sectional view illustrating a semiconductor laser device according to an eighth embodiment of the present invention. The semiconductor laser device according to the present embodiment is a ridge type laser having a ridge structure formed by removing, through etching, the p-type AlGaAs cladding layer **4** up to a midpoint. The rest of the configuration is similar to that of the first embodiment.

[0083] Since the configuration of the present embodiment can suppress expansion of an x-direction current in the p-type AlGaAs cladding layer **4**, and can thereby cause the